

SEQUENCE LISTING

<110> BASF Aktiengesellschaft

<120> NADH-dependent cytochrome b5 reductase as target for herbicides

<130> PF 53755

<150> DE 102 32 778

<151> 2002-07-18

<160> 22

<170> PatentIn version 3.1

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<212> DNA

<213> Arabidopsis thaliana

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<221> CDS

<222> (1)..(843)

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aca	tcc	tcc	aag	aaa	cgc	aga	gtg	tgt	ttg	gat	cca	gag	aat	ttc	aag	144
Thr	Ser	Ser	Lys	Lys	Arg	Arg	Val	Cys	Leu	Asp	Pro	Glu	Asn	Phe	Lys	
			35				40					45				

gag	ttc	aag	ctt	gtt	aag	aga	cat	cag	ctt	agt	cac	aat	gtg	gcc	aag	192
Glu	Phe	Lys	Leu	Val	Lys	Arg	His	Gln	Leu	Ser	His	Asn	Val	Ala	Lys	
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Phe	Val	Phe	Glu	Leu	Pro	Thr	Ser	Thr	Ser	Val	Leu	Gly	Leu	Pro	Ile	
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Glu Leu Val Ile Lys Met Tyr Pro Gln Gly Arg Met Ser His His Phe
115 120 125

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Arg Glu Met Arg Val Gly Asp His Leu Ala Val Lys Gly Pro Lys Gly
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Arg Phe Lys Tyr Gln Pro Gly Gln Phe Arg Ala Phe Gly Met Leu Ala
145 150 155 160

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Gly Gly Ser Gly Ile Thr Pro Met Phe Gln Val Ala Arg Ala Ile Leu
165 170 175

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Glu Asn Pro Thr Asp Lys Thr Lys Val His Leu Ile Tyr Ala Asn Val
180 185 190

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Thr Tyr Asp Asp Ile Leu Leu Lys Glu Glu Leu Glu Gly Leu Thr Thr
195 200 205

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Asn Tyr Pro Glu Gln Phe Lys Ile Phe Tyr Val Leu Asn Gln Pro Pro
210 215 220

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Glu Val Trp Asp Gly Gly Val Gly Phe Val Ser Lys Glu Met Ile Gln
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Thr His Cys Pro Ala Pro Ala Ser Asp Ile Gln Ile Leu Arg Cys Gly
245 250 255

cca ccg cca atg aac aag gcc atg gct gca aac ctt gaa gct ctg gga 816
Pro Pro Pro Met Asn Lys Ala Met Ala Ala Asn Leu Glu Ala Leu Gly
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 35 40 45

Glu Phe Lys Leu Val Lys Arg His Gln Leu Ser His Asn Val Ala Lys
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Phe Val Phe Glu Leu Pro Thr Ser Thr Ser Val Leu Gly Leu Pro Ile
 65 70 75 80

Gly Gln His Ile Ser Cys Arg Gly Lys Asp Gly Gln Gly Glu Asp Val
 85 90 95

Ile Lys Pro Tyr Thr Pro Thr Thr Leu Asp Ser Asp Val Gly Arg Phe
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Glu Leu Val Ile Lys Met Tyr Pro Gln Gly Arg Met Ser His His Phe
 115 120 125

Arg Glu Met Arg Val Gly Asp His Leu Ala Val Lys Gly Pro Lys Gly
 130 135 140

Arg Phe Lys Tyr Gln Pro Gly Gln Phe Arg Ala Phe Gly Met Leu Ala
 145 150 155 160

Gly Gly Ser Gly Ile Thr Pro Met Phe Gln Val Ala Arg Ala Ile Leu
 165 170 175

Glu Asn Pro Thr Asp Lys Thr Lys Val His Leu Ile Tyr Ala Asn Val
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Thr Tyr Asp Asp Ile Leu Leu Lys Glu Glu Leu Glu Gly Leu Thr Thr
 195 200 205

Asn Tyr Pro Glu Gln Phe Lys Ile Phe Tyr Val Leu Asn Gln Pro Pro
 210 215 220

Glu Val Trp Asp Gly Gly Val Gly Phe Val Ser Lys Glu Met Ile Gln
 225 230 235 240

Thr His Cys Pro Ala Pro Ala Ser Asp Ile Gln Ile Leu Arg Cys Gly
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Thr Gln Ile Ser His Asn Val Ala Lys Phe Arg Phe Glu Leu Pro Thr	
20 25 30	
cct act tct gta ttg ggc cta ccc att gga caa cat att agt tgc agg	144
Pro Thr Ser Val Leu Gly Leu Pro Ile Gly Gln His Ile Ser Cys Arg	
35 40 45	
ggc aag gat agt caa ggt gaa gag gtt gtt aaa ccg tac aca cca act	192
Gly Lys Asp Ser Gln Gly Glu Glu Val Val Lys Pro Tyr Thr Pro Thr	
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act ttg gat tca gat gtt gga tat ttt gaa cta gtt att aag atg tat	240
Thr Leu Asp Ser Asp Val Gly Tyr Phe Glu Leu Val Ile Lys Met Tyr	
65 70 75 80	
cct caa gga agg atg tct cat cat ttc cga gaa atg cgt gag ggt gat	288
Pro Gln Gly Arg Met Ser His His Phe Arg Glu Met Arg Glu Gly Asp	
85 90 95	
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Tyr Leu Ala Val Lys Gly Pro Lys Gly Arg Phe Lys Tyr Gln Pro Gly	
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caa gtg aga gca ttt gga atg ctt gct gga ggc tct ggc att acc cca	384
Gln Val Arg Ala Phe Gly Met Leu Ala Gly Gly Ser Gly Ile Thr Pro	
115 120 125	
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Met Phe Gln Val Ala Arg Ala Ile Leu Glu Asn Pro Asn Asp Lys Thr	
130 135 140	
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 165 170 175

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 180 185 190

gga ttt gtg tcc aag gaa atg att cag act cat tgt cct gcc ccg gca 624
 Gly Phe Val Ser Lys Glu Met Ile Gln Thr His Cys Pro Ala Pro Ala
 195 200 205

tct gac att cag ata ctg agg tgt ggt cca cct cca atg aac aag gct 672
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 210 215 220

atg gct gct cat ctt gaa gcc ctt gga tac acc cca gag atg caa ttc 720
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<212> PRT

<213> Nicotiana tabacum

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 35 40 45

Gly Lys Asp Ser Gln Gly Glu Glu Val Val Lys Pro Tyr Thr Pro Thr
 50 55 60

Thr Leu Asp Ser Asp Val Gly Tyr Phe Glu Leu Val Ile Lys Met Tyr
 65 70 75 80

Pro Gln Gly Arg Met Ser His His Phe Arg Glu Met Arg Glu Gly Asp
 85 90 95

Tyr Leu Ala Val Lys Gly Pro Lys Gly Arg Phe Lys Tyr Gln Pro Gly
 100 105 110

Gln Val Arg Ala Phe Gly Met Leu Ala Gly Gly Ser Gly Ile Thr Pro
 115 120 125

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Met Phe Gln Val Ala Arg Ala Ile Leu Glu Asn Pro Asn Asp Lys Thr
 130 135 140

Lys Val His Leu Ile Tyr Ala Asn Val Thr Tyr Glu Asp Ile Leu Leu
 145 150 155 160

Lys Glu Gln Leu Asp Gly Leu Ala Ala Asn Tyr Pro Asp Arg Phe Lys
 165 170 175

Ile Tyr Tyr Val Leu Asn Gln Pro Pro Glu Val Trp Ser Gly Gly Val
 180 185 190

Gly Phe Val Ser Lys Glu Met Ile Gln Thr His Cys Pro Ala Pro Ala
 195 200 205

Ser Asp Ile Gln Ile Leu Arg Cys Gly Pro Pro Pro Met Asn Lys Ala
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